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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/923,942	08/07/2001	Nobuya Okuda	F-7109	4525

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Jordan and Hamburg
122 East 42nd Street
New York, NY 10168

EXAMINER

CAPRON, AARON J

ART UNIT	PAPER NUMBER
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3714

DATE MAILED: 09/16/2003

11

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/923,942

Applicant(s)

OKUDA ET AL.

Examiner

Aaron J. Capron

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 June 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2-10.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Information Disclosure Statement

The examiner's consideration under MPEP 609 of the non-English language references cited on submitted Information Disclosure Statement is limited to the extent described for the cited non-English documents and any corresponding translations therein only so far as the particular portion respectively translated and without reference to a complete invention thereof. It is further noted that the translations are not attested as to their accuracy.

The information disclosure statement filed June 6, 2002 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 112

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The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Referring to claims 1 and 15, the use of the pronouns, such as "it", is/are indefinite and fail(s) to particularly point out the nouns that the pronouns are referring to.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by JP Publication 08-221187 (hereafter "JP '187").

Referring to claim 1, JP '187 discloses a monitor provided at a specified height position of a casing of the game machine for displaying images; a game control unit for controlling the progress of a game; a display control unit for generating a 3D image viewed from a viewing point of a simulated camera and displaying the image on a screen of a monitor; head detecting means for detecting at least a position of the head of a game player located in a play area before the screen of the monitor in at least one linear direction in a 3D space; and viewing point changing means for moving the viewing point of the simulated camera to follow a displacing

direction and a displacing amount of the detected position of the head (abstract, paragraph 12-13 and paragraph 19).

Referring to claim 2, JP '187 discloses an externally operable operation unit, wherein the game control unit causes operation contents from the operation unit to be reflected on the progress of the game (). *Front page of JP translation.* *AJC*

Claim 15 corresponds in scope to a method set forth for use of the gaming machine listed in the claims above and are encompassed by use as set forth in the rejection above.

Claims 1-2, 6 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Lewis et al. (U.S. Patent No. 5,177,872; hereafter "Lewis").

Referring to claim 1, Lewis discloses a monitor (Figure 1, item 101) provided at a specified height position of a casing of the game machine for displaying images; a game control unit (Figure 1, item 13) for controlling the progress of a game; a display control unit for generating a 3D image viewed from a viewing point of a simulated camera and displaying the image on a screen of a monitor (2:60-3:3); head detecting means for detecting at least a position of the head of a game player located in a play area before the screen of the monitor in at least one linear direction in a 3D space; and viewing point changing means for moving the viewing point of the simulated camera to follow a displacing direction and a displacing amount of the detected position of the head (3:39-47).

Referring to claim 2, Lewis discloses an externally operable operation unit, wherein the game control unit causes operation contents from the operation unit to be reflected on the progress of the game (Figure 1).

Referring to claim 6, Lewis discloses the head detecting means further includes a distance-measuring sensor for remotely detecting at least one of a height position and a transverse position of the head (2:60-3:3).

Claim 15 corresponds in scope to a method set forth for use of the gaming machine listed in the claims above and are encompassed by use as set forth in the rejection above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP '187 in view of Ball (U.S. Patent No. 5,686,942).

Referring to claim 6, JP '187 discloses a 3D video game machine, but does not disclose the head detecting means includes a distance-measuring sensor for remotely detecting at least one of height position and a transverse position of the head. However, Ball discloses a head detecting means further including a distance measuring sensor for remotely detecting at least one of height position (3:27-3:51) and a transverse position of the head. One would be motivated to combine the reference in order to allow a user to play a game as an alternative to the use of the head gear. This would make the game more comfortable for the user and would allow for more freedom of movement. Therefore, it would have been obvious to one having ordinary skill in the

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art at the time the invention was made to incorporate the motion sensors of Ball into the game machine of JP '187 in order to make the game more comfortable for the user and allow for more freedom of movement.

Referring to claim 7, JP '187 in view of Ball disclose the distance measuring sensor includes one propagation medium transmitter, a first and second propagation medium receivers arranged in two positions along the transverse direction of the screen of the monitor at the opposite sides of the propagation medium transmitter and adapted to receive propagation mediums transmitted from the propagation medium transmitter and reflected by the game player's head, and the head detecting means includes a head position determined means for determining the position of the head of the game player based on lapses of time from a point of time of transmission to reception by the first and second propagation medium receivers (3:27-4:6, 4:24-5:11, 5:21-30).

Claims 4 and 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP '187 in view of Oh (U.S. Patent No. 5,616,078).

Referring to claim 10, JP '187 discloses a head detecting means, but does not disclose an optical image pickup means and a head image extracting means for extracting an image of the game player's head from a picked image. However, Oh discloses that a motion capture unit can capture images of the player in order to allow the player to control the movement of the game character on the game screen (4:19-35, 5:24-30). One would be motivated to combine the references in order to give the game a more realistic feel since the game adjusts the game character with respect the game player's movement (1:37-43). Therefore, it would have been

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obvious to one having ordinary skill in the art at the time the invention was made to incorporate the capturing of an image, as disclosed by Oh, into the game device of JP '187 in order to give the game a more realistic feel since the game adjusts the game character with respect the game player's movement.

Referring to claim 11, JP '187 and Oh disclose a background-deleting surface provided at a side of the play area opposite from the image pickup means (reference sheet, claim 14).

Referring to claims 12 and 14, JP '187 and Oh discloses a head detecting means includes an infrared camera (4:50-5:3), an infrared emitting member fittable on the game's player head; and a head image extracting means for extracting an image of the game player's head from an image obtained by receiving infrared rays from the infrared emitting member, wherein the member having an infrared reflecting surface (4:50-4:58).

Referring to claim 13, JP '187 and Oh disclose a member having an infrared reflecting surface to monitor the information with respect to the infrared light, but does not disclose that the member absorbs infrared light. However, it is notoriously well known within the art that an infrared absorbing member can be provided at a side of the play area opposite from the camera in order to repress infrared radiation. One would be motivated to provide an infrared absorbing member in order to absorb the heat that is coming from the game device. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate an infrared absorbing member into the game device of JP '187 and Oh in order to absorb the heat that is caused by the game device.

Referring to claim 4, JP '187 in view of Oh disclose the head detecting means further includes a distance measuring sensor for remotely detecting a height position of the head (5:44-67).

Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis as applied to claims 1-2, 6 and 15 above, and further in view of Ahdoot (U.S. Patent No. 5,913,727).

Referring to claim 3, Lewis discloses a head detecting means and a head position determining means for determining a position of the head in at least one direction on the horizontal plane, but does not disclose including a sheet shaped pressure sensor. However, Ahdoot discloses a sheet shaped pressure sensor (Figure 1, item 70) in combination with 3D viewing means (Figure 1, item 61; 4:52-55). One would be motivated to combine the references in order to allow the ability to play other players by way of generating 3D images that are responsive to the player's movement (2:15-34). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the sheet shaped pressure sensor of Ahdoot into the device of Lewis in order to allow the ability to play other players by way of generating 3D images that are responsive to the player's movement.

Referring to claim 4, Lewis discloses the head detecting means further includes a distance-measuring sensor for remotely detecting a height position of the head (2:14-19).

Claims 5 and 7-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis in view of Ahdoot as applied to claims 3-4 above, and further in view of Oh (U.S. Patent No. 5,616,078).

Referring to claim 5, Lewis and Ahdoot disclose or suggest the pressure sensor being an analog sensor, but do not disclose calculating the center of gravity. However, Oh discloses calculating the center of gravity based upon the plurality of sensors/markers in order to smoothly manipulate the game character and sufficiently reproduce the motions of the game player (2:1-4). One would be motivated to combine the references in order to more smoothly manipulate the game character and more sufficiently reproduce the motions of the game player. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate calculating the center of gravity of Oh into the device of Lewis and Ahdoot in order to smoothly manipulate the game character and sufficiently reproduce the motions of the game player.

Referring to claim 7, Lewis in view of Ahdoot and Oh disclose the distance measuring sensor includes one propagation medium transmitter, a first and second propagation medium receivers arranged in two positions along the transverse direction of the screen of the monitor at the opposite sides of the propagation medium transmitter and adapted to receive propagation mediums transmitted from the propagation medium transmitter and reflected by the game player's head (Ahdoot Figure 1), and the head detecting means includes a head position determined means for determining the position of the head of the game player based on lapses of time from a point of time of transmission to reception by the first and second propagation medium receivers (Oh 6:10-18).

Referring to claim 8, Lewis in view of Ahdoot and Oh disclose the head detecting means includes a position detecting sensor for detecting a 3D position of the head and the position detecting sensor includes one propagation medium transmitter, at least three propagation medium receivers located around the propagation medium transmitter and in different positions on a horizontal plane (Ahdoot: Figure 1) and adapted to receive propagation mediums transmitted from the propagation medium transmitter and reflected by the game player's head and head position determining means for determining a position of the game player's head in the 3D space based on lapses of time.

Referring to claim 9, Lewis in view of Ahdoot and Oh disclose the distance measuring means includes a plurality of propagation medium transmitting and receiving devices arranged in a linear direction on a horizontal plane located above the player area and faced downward (Oh: Figure 1) and head position determining means for determining a position of the game player's head in the 3D space based on lapses of time.

Referring to claim 10, Lewis in view of Ahdoot and Oh discloses a head detecting means, and that a motion capture unit can capture images of the player in order to allow the player to control the movement of the game character on the game screen (Oh: 4:19-35, 5:24-30).

Referring to claim 11, Lewis in view of Ahdoot and Oh disclose a background-deleting surface provided at a side of the play area opposite from the image pickup means (Oh: reference sheet, claim 14).

Referring to claims 12 and 14, Lewis in view of Ahdoot and Oh discloses a head detecting means includes an infrared camera (Oh 4:50-5:3), an infrared emitting member fittable on the game's player head; and a head image extracting means for extracting an image of the

game player's head from an image obtained by receiving infrared rays from the infrared emitting member, wherein the member having an infrared reflecting surface (Oh: 4:50-4:58).

Referring to claim 13, Lewis in view of Ahdoot and Oh disclose a member having an infrared reflecting surface to monitor the information with respect to the infrared light, but does not disclose that the member absorbs infrared light. However, it is notoriously well known within the art that an infrared absorbing member can be provided at a side of the play area opposite from the camera in order to repress infrared radiation. One would be motivated to provide an infrared absorbing member in order to absorb the heat that is coming from the game device. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate an infrared absorbing member into the game device of Lewis in view of Ahdoot and Oh in order to absorb the heat that is caused by the game device.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron J. Capron whose telephone number is (703) 305-3520. The examiner can normally be reached on M-Th 8-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Hughes can be reached on (703) 308-1806. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1148.

ASC

MARK SAGER
PRIMARY EXAMINER


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